Digital Literacy in Struggling Adult Readers

What was the goal of the study?

The researchers wanted to better understand struggling adult learners' strengths and weaknesses in digital literacy and how their performance on a customized Northstar Digital Literacy Assessment related to age, gender, and computer use.

Why was the study conducted?

Adaptive learning technologies (e.g., online educational systems) have potential to help adult learners improve their reading skills. However, adults with low literacy also have low digital literacy. To determine whether adults with low literacy would be able to use adaptive learning technologies, their digital literacy skills must first be assessed.

What did the study find?

Adult learners performed well on items that involved the use of computer hardware, such as: "Click on the picture of a mouse" (98.2% correct) or "Click on the keyboard" (95.5% correct). Participants struggled the most with items that involved multiple steps, for example: "Select all of the internet browser icons. Then, click NEXT to continue" (24.3% correct). The study also found that older adults performed worse on digital literacy. No gender differences were found in digital literacy performance. Lastly, digital literacy did not appear to be associated with self-reported number of daily hours of computer use. Overall, the researchers found that adult learners' success or failure on digital literacy tasks could be largely attributed to five task components: function keys, typing, using icons, right clicking, and mouse dragging.

Who participated in the study?

The participants in this study were 114 adult learners in the U.S. and Canada.

How was the study conducted?

Participants completed the customized Northstar Digital Literacy Assessment, which includes questions about basic computer use, the World Wide Web, the Windows operating system, using email, using Microsoft Word, and information literacy.

How can people use the results?

Practitioners may want to consider assessing learners' digital literacy skills before deploying adaptive learning technologies.

Reference

Olney, A. M., Bakhtiari, D., Greenberg, D., & Graesser, A. (2017). Assessing computer literacy of adults with low literacy skills. In X. Hu, T. Barnes, A. Hershkovitz, & L. Paquette (Eds.), Proceedings of the 10th International Conference on Educational Data Mining (pp. 128–134).